

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61K 7/00, 7/48		A1	(11) International Publication Number: WO 99/45891 (43) International Publication Date: 16 September 1999 (16.09.99)
(21) International Application Number: PCT/EP99/01128 (22) International Filing Date: 17 February 1999 (17.02.99) (30) Priority Data: 60/077,614 10 March 1998 (10.03.98) US (71) Applicant (for AU BB CA CY GB GD GH GM IE IL KE LC LK LS MN MW NZ SD SG SL SZ TT UG ZW only): UNILEVER PLC [GB/GB]; Unilever House, Blackfriars, London EC4P 4BQ (GB). (71) Applicant (for all designated States except AU BB CA CY GB GD GH GM IE IL IN KE LC LK LS MN MW NZ SD SG SL SZ TT UG ZW): UNILEVER N.V. [NL/NL]; Weena 455, NL-3013 AL Rotterdam (NL). (71) Applicant (for IN only): HINDUSTAN LEVER LIMITED [IN/IN]; Hindustan Lever House, 165/166 Backbay Reclamation, Mumbai 400 020, Maharashtra (IN).			(72) Inventors: CROTTY, Brian, Andrew; Unilever Home & Personal Care USA, 40 Merritt Boulevard, Trumbull, CT 06611 (US). MINER, Philip, Edward; Unilever Home & Personal Care USA, 40 Merritt Boulevard, Trumbull, CT 06611 (US). JOHNSON, Anthony, William; Unilever Home & Personal Care USA, 40 Merritt Boulevard, Trumbull, CT 06611 (US). ZNAIDEN, Alexander, Paul; Unilever Home & Personal Care USA, 40 Merritt Boulevard, Trumbull, CT 06611 (US). SLAVTCHEFF, Craig, Stephen; Unilever Home & Personal Care USA, 40 Merritt Boulevard, Trumbull, CT 06611 (US). (74) Agent: ROTS, M., J., F.; Unilever plc, Patent Dept., Colworth House, Sharnbrook, Bedford MK44 1LQ (GB). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: FRAGRANCED COSMETIC PRODUCT			
(57) Abstract <p>A cosmetic product is provided for removing keratotic skin plugs. The product is a strip sealed for storage having from 0.0001 to 2 % fragrance within the atmosphere of the sealed pouch. The strip includes a flexible substrate sheet onto which a composition containing an adhesive polymer is deposited. Fragrance is immediately available upon opening the pouch. Since fragrance is invested on outer surfaces of the strip, a user can immediately smell the scent upon the application of the strip to the nose or other facial areas. There is no longer dependence for release of fragrance held within the adhesive polymer composition.</p>			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

- 1 -

FRAGRANCED COSMETIC PRODUCT

BACKGROUND OF THE INVENTION

5 Field of the Invention

The invention concerns a fragranced cosmetic product effective for the removal of keratotic plugs from skin pores.

10

The Related Art

Highly visual pores on facial skin surfaces are perceived, especially by women, to be a serious beauty problem. The conspicuous nature of this problem is caused by keratotic plugs formed within pores of the skin. Keratotic plugs are dead epidermal cells keratinized together with sebaceous matter and dirt. Absent proper treatment, not only will beauty suffer but also various dermatological problems may arise. Removal with detergents or with make-up removers (e.g. cold cream) have not provided adequate solution to the problem. Squeezing the skin in an attempt to remove keratotic plugs can lead to infections which can damage skin.

25

Peelable masks have been employed to attack plugged facial pores. They are applied as mobile films to the skin and peeled off after drying. Typically, the film is a nonionic polymer such as polyvinyl alcohol or polyvinyl pyrrolidone. Unfortunately, the mask approach is still not sufficiently

30

- 2 -

effective for removing dirt from skin pores and especially for removing keratotic plugs.

U.S. Patent 5,512,277 (Uemura et al.) has reported a
5 keratotic plug remover composition including use of a peelable mask formed from a resin functionalized with salt forming groups. Particularly preferred are cationic polymers which may be delivered as a poultice.

10 U.S. Patent 4,126,142 (Saute) describes the use of sodium polystyrene sulfonate applied as a film to the face for cleansing skin and diminishing wrinkles.

Both Uemura et al. and Saute have examples which incorporate
15 perfume or fragrance within the formulations. Neither appreciate that perfume will not readily release from a semi-solid or solid composition, especially when in contact on skin for only a short period of time.

20 Within the last year the market has seen introduction of a new product form to remove blackheads and unclog pores. Pond's® and Jergens Biore® have offered band-aid sized cleansing strips for adhesively removing contaminants from the nose and other facial areas. These products do not
25 contain any fragrance. A problem in the context of adhesive strips is that fragrances can interfere with adhesion of those strips to the skin.

A still further issue is avoidance of delivering too heavy
30 an amount of perfume. It must be appreciated that a

- 3 -

keratotic plug remover in the form of a peelable strip is generally placed in close proximity to the nose. Too little fragrance and there is no smell. Too much and the smell can become unpleasant.

5

Accordingly, it is an object of the present invention to provide keratotic plug removing products, especially strips, which deliver an immediate pleasant scent sensation.

10 Another object of the present invention is to provide keratotic plug removing products, especially strips, which provide a relaxing level of fragrance in insufficient amount to swamp smell receptors in the nose.

15 Still another object of the present invention is to provide keratotic plug removing products, especially strips, which despite the presence of fragrance do not allow the fragrance to interfere with adhesive properties of the strips.

20 These and other objects will become more apparent from the summary and detailed description which follow.

SUMMARY OF THE INVENTION

25 A cosmetic product for removing keratotic plugs from skin pores is provided which includes:

(A) a strip comprising:

30 (i) a flexible substrate sheet; and

- 4 -

(ii) a composition containing a polymer selected from the group consisting of anionic, cationic, nonionic, amphoteric, zwitterionic and polymer mixtures thereof deposited onto the substrate sheet, the composition increasing in tackiness upon being wetted just prior to use thereby enhancing the composition adhesivity to skin; and

(B) a pouch sealably enclosing the strip, a fragrance also being enclosed but separate from the strip present in an amount from 0.00001 to 2% by weight of the strip.

DETAILED DESCRIPTION OF THE INVENTION

Now it has been discovered that immediate impact and highly controlled fragrance delivery can be accomplished in the context of strip products by investing fragrance within the product pouch. Investment is achieved in a variety of ways. Fragrance may be sprayed or deposited along an interior lining of the pouch. Alternatively fragrance may be trapped along the heat sealed edges of the pouch and released as a consumer tears through the heat seal to recover the strip. A still further approach is to spray or print fragrance on an upper or lower surface of the strip or any backing sheet onto which the strip may removably be supported. When the strip is sealed within a pouch, at least some of the topically deposited fragrance will volatilize into the pouch chamber.

- 5 -

Additional fragrance beyond the invested fragrance may also be present in the adhesive or resinous components of the strip. However, these are intended as adjunct only.

- 5 The term "fragrance" is defined as a mixture of odoriferous components, optionally mixed with a suitable solvent diluent or carrier, which is employed to impart a desired odor.

Perfume components and mixtures thereof may be obtained from
10 natural products such as essential oils, absolutes, resinoids, resins and concretes, as well as synthetic products such as hydrocarbons, alcohols, aldehydes, ketones, ethers, carboxylic acids, esters, acetals, ketals, nitriles and the like, including saturated and unsaturated compounds,
15 aliphatic, carbocyclic and heterocyclic compounds.

Suitable characteristics of such perfumes/fragrances can include at least one of the following, in any combination:

- (1) liquid or semi-liquid after mixing with the other
20 components; (2) pleasant and/or clean odor when mixed with other components, e.g., one or more of lavender, violet, rose, jasmin, pine, woody, floral, fruity, lemon, lime, apple, peach, raspberry, strawberry, banana, plum, apricot, vanilla, pear, eucalyptus, aromatic, aldehydic, tutti
25 frutti, oriental, sweet, amber, Paola, Muguet, Citron (lime) ella, and the like; (3) specific gravity (20/20) in the range of 0.600-1.300, preferably 0.800-1.100, each preferably varying 0.001-0.05, more preferably 0.008-0.020;
30 (4) refractive index (20°C) of 1.300-1.800, preferably 1.400-1.600, each preferably varying 0.001-0.05, more preferably

- 6 -

0.008-0.020; (5) saponification value of 5-300, preferably 10-250; and (6) having a flash point of 20-200 Pensky-Martens Closed Cup (P.M.C.C.) and 10-100 Tag-Closed Cup (T.C.C.).

5

Typical perfume ingredients which may be employed for the present invention can be selected from one or more of:

10	2-methoxy naphthalene
	Allyl cyclohexane propionate
	alpha-citronellal
	alpha-ionone
	alpha-Santalol
	alpha-Terpineol
15	Ambrettolide
	Amyl benzoate
	Amyl cinnamate
	Amyl cinnamic aldehyde
	Aurantiol
20	Benzaldehyde
	Benzophenone
	Benzyl acetate
	Benzyl salicylate
	Beta-caryophyllene
25	beta-Methyl naphthyl ketone
	Cadinene
	Cavacrol
	Cedrol
	Cedryl acetate
30	Cedryl formate
	Cinnamyl cinnamate
	cis-Jasmone
	Coumarin
	Cyclamen aldehyde
35	Cyclohexyl salicylate
	d-Limonene
	delta-Nonalactone
	delta-Undecalactone
	Dihydro isojasmonate
40	Dihydro mycenol
	Dimethyl acetal
	Diphenyl methane

- 7 -

	Diphenyl oxide
	Dodecalactone
	Ethyl methyl phenyl glycidate
5	Ethyl undecylenate
	Ethylene brassylate
	Eugenol
	Exaltolide
	Galaxolide
10	gamma-n-methyl ionone
	gamma-Undecalactone
	Geranial
	Geranyl acetate
	Geranyl anthranilate
15	Geranyl phenyl acetate
	Hexadecanolide
	Hexenyl salicylate
	Hexyl cinnamic aldehyde
	Hexyl salicylate
20	Hydroxycitronellal
	Indole
	Iso E super
	Iso-Amyl salicylate
	Iso-bornyl acetate
25	Iso-butyl quinoline
	Iso-Eugenol
	Laevo-Carvone
	Lilial (p-t-bucinal)
	Linalool
30	Linalyl acetate
	Linalyl benzoate
	Methyl cinnamate
	Methyl dihydrojasmonate
	Methyl-N-methyl anthranilate
35	Musk indanone
	Musk ketone
	Musk tibetine
	Myristicin
	Nerol
40	Oxahexadecanolide-10
	Oxahexadecanolide-11
	para-cymene
	para-tert-Butyl cyclohexyl acetate
	Patchouli alcohol
45	Phantolide
	Phenyl ethyl alcohol
	Phenyl ethyl benzoate

- 8 -

5 Phenyl heptanol
Phenylhexanol
Phexylethylphenylacetate
Thibetolide
Vanillin
Vertenex
Vetiveryl acetate
Yara-yara
10 Ylangene

Suitable solvents, diluents or carriers for perfumes as mentioned above are for example: ethanol, isopropanol, diethylene glycol monoethyl ether, dipropyl glycol, triethyl
15 citrate and the like.

Particularly preferred perfume components of the present invention are cyclic and acyclic terpenes and terpenoids. These materials are based upon isoprene repeating units.
20 Examples include alpha and beta pinene, myrcene, geranyl alcohol and acetate, camphene, dl-limonene, alpha and beta phellandrene, tricyclene, terpinolene, allocimmane, geraniol, nerol, linanool, dihydrolinanool, citral, ionone, methyl ionone, citronellol, citronellal, alpha terpeneol,
25 beta terpeneol, alpha fenchol, borneol, isoborneol, camphor, terpinen-1-ol, terpin-4-ol, dihydroterpineol, methyl chavicol, anethole, 1,4 and 1,8 cineole, geranyl nitrile, isobornyl acetate, linalyl acetate, caryophyllene, alpha cedrene, guaiol, patchouli alcohol, alpha and beta santalol
30 and mixtures thereof.

Amounts of the fragrance may range from 0.00001 to 2%, preferably from 0.0001 to 1%, optimally from 0.01 to 0.5%, most preferably from 0.05 to 0.25% by weight of the strip.

- 9 -

Cosmetic products of the present invention are based on a strip including a flexible substrate sheet and an adhesive composition, the strip being held within a sealably enclosing pouch. The flexible substrate sheet is

5 impregnated by an adhesive composition containing an anionic, cationic, nonionic, amphoteric or zwitterionic polymer. Mixtures may be of polymers within any one category or between different category types. Illustrative of the latter, and a preferred embodiment, is a combination of an
10 anionic and nonionic polymer. In a dry state, the composition preferably but not necessarily is non-tacky to the touch. The impregnated substrate sheet is sealably enclosed in a pouch, particularly a laminated foil package to control moisture level.

15

Pouches of the present invention are normally of the laminated foil variety. These are heat sealed and utilize foils with very low vapor (e.g. moisture) transmission rates (a rate of transmission less than 5% per day, preferably
20 less than 1% per day volatile fluid gain or loss). Walls suitable for the pouch may utilize polyester, polyethylene or polypropylene sheets, several layers of which can be laminated together. These layers may also be provided with a coating of wax or other volatile fluid impermeable
25 material.

30

The product is used by removing the strip from its usually individually wrapped pouch and either directly wetting the composition on the sheet or indirectly by wetting the face
in areas to be contacted by the composition. In either instance, the wetting agent interacts with the composition

- 10 -

so it becomes tacky and sufficiently mobile to flow into skin pores. The time between removal of strip from the pouch and use may be anywhere from 5 seconds to several hours, usually from 10 to 20 seconds. Pure water is the preferred wetting agent. However, other liquid systems or gels could be employed. Suitable wetting agents would include alcohols such as ethanol, propanol, propylene glycol, polyethylene glycol, polypropylene glycol and especially mixtures of these alcohols with water. Gels would normally consist of structured liquids (particularly water) thickened with structuring agents such as Carbomer.

Subsequent to wetting, the composition is allowed to dry over the area of treatment. During drying the keratotic plugs stickingly adhere to the composition. Advantageously the drying period ranges from 1 minute to 5 hours, preferably from 5 minutes to 1 hour, optimally from 10 to 20 minutes. Thereafter, the dried composition with adhered plugs is peeled from the skin.

Mobility of the composition may be measured by yield point. The yield point should range from 1 to 400 Pascals, preferably from 20 to 200, optimally from 50 to 100 Pascals.

Nonionic polymers suitable for adhesive film deposition are the copolymers of vinyl acetate and crotonic acid, terpolymers of vinyl acetate, crotonic acid and a vinyl ester of an alpha-branched saturated aliphatic monocarboxylic acid such as vinyl neodecanoate; copolymers of methyl vinyl ether and maleic anhydride (molar ratio about 1.1) wherein such copolymers are 50% esterified with a

- 11 -

saturated alcohol containing from 1 to 4 carbon atoms such as ethanol or butanol; and acrylic copolymers, terpolymers, etc., containing acrylic acid or methacrylic acid esters of acrylic or methacrylic acid with one or more saturated

5 alcohols having from 1 to 22 carbon atoms such as methyl methacrylate, ethyl acrylate, ethyl methacrylate, n-butyl acrylate, t-butyl acrylate, t-butyl methacrylate, n-butyl methacrylate, n-hexyl acrylate, n-octyl acrylate, lauryl methacrylate and behenyl acrylate, glycols having from 1 to

10 6 carbon atoms such as hydroxypropyl methacrylate and hydroxyethyl acrylate, styrene, vinyl caprolactam, vinyl acetate, acrylamide, alkyl acrylamides and methacrylamides having 1 to 8 carbon atoms in the alkyl group such as methacrylamide, t-butyl acrylamide and n-octyl acrylamide,

15 and other compatible unsaturated monomers. One specific example is the emulsion polymerized terpolymer of methacrylic acid, n-butyl acrylate and ethyl acrylate (e.g., in a weight percent ratio of 31:42:27, respectively).

20 Further examples of nonionic adhesive polymers are homopolymers of N-vinylpyrrolidone and copolymers of N-vinylpyrrolidone with compatible nonionic monomers such as vinyl acetate and terpolymers of ethyl acrylate, butyl methacrylate and methyl methacrylate. Nonionic polymers

25 containing N-vinylpyrrolidone in various weight average molecular weights are available commercially from ISP Corporation such as homopolymers of N-vinylpyrrolidone having an average molecular weight of about 630,000 under the trademark PVP K-90 and those having an average molecular

30 weight of about 1,000,000 sold under the trademark of PVP K-120. Particularly preferred is poly(methyl vinyl

- 12 -

ether/maleic anhydride) as an unneutralized resin available from ISP Corporation under the trademark Gantrez[®] S-97 BF.

Anionic adhesive polymers often are derived from the
5 nonionic types which include carboxylic acid functions. Alkaline agents are employed to neutralize the carboxylic acid or anhydride transforming them into anionic salts. Examples of suitable neutralizing agents include
2-amino-2-methyl-1,3-propanediol (AMPD);
10 2-amino-2-ethyl-1,3-propanediol (AEPD);
2-amino-2-methyl-1-propanol (AMP); 2-amino-1-butanol (AB);
monoethanolamine (MEA); diethanolamine (DEA);
triethanolamine (TEA); monoisopropanolamine (MIPA);
diisopropanol-amine (DIPA); triisopropanolamine (TIPA); and
15 dimethyl stearamine (DMS). Most preferred is AMP.

Particularly preferred anionic polymers are the salts of poly(methyl vinyl ether/maleic anhydride) and polystyrene sulfonic acid. The former is obtained by at least partial
20 neutralization of Gantrez[®] S-97 BF and the latter available from the National Starch & Chemical Company under the trademarks Versa TL-501 and Flexan[®] 130 having respective molecular weights of about 500,000 and 100,000. Other
polymer films which may be employed and are commercially
25 available as listed in the Table below.

TABLE I

POLYMER TRADEMARKS (SUPPLIER)	CTFA DESIGNATIONS
Resyn [®] 28-1310 (NSC)	Vinyl acetate/crotonic acid copolymer
Resyn [®] 28-2930 (NSC)	Vinyl acetate/crotonic acid/vinyl neodecanoate copolymer
Resyn [®] 28-2913 (NSC)	Vinyl acetate/crotonic acid/vinyl neodecanoate copolymer
Versatyl [®] 40 (NSC)	Octylacrylamide/acrylates copolymer
Versatyl [®] 42 (NSC)	Octylacrylamide/acrylates copolymer
Experimental Resin (NSC)	Vinyl acetate/vinyl neodecanoate/maleic half-ester
Ultrahold-8 [®] (BASF)	Acrylate/acrylamide copolymer
Luviset [®] CAP (BASF)	Vinyl acetate/crotonic acid/vinyl propionate copolymer
PVP K-30 (ISP)	PVP
PVP/VA E-335 (ISP)	PVP/Vinyl acetate copolymer
PVP/VA E-735 (ISP)	PVP/Vinyl acetate copolymer
Gantrez [®] ES-225 (ISP)	Ethyl ester of PVM/MA copolymer
Gantrez [®] ES-425 (ISP)	Butyl ester of PVM/MA copolymer
Gaffix [®] VC-713 (ISP)	Vinyl caprolactam/PVP/dimethyl aminoethyl methacrylate copolymer

- 5 Cationic adhesive polymers suitable for the present invention may be prepared as homo- or copolymers from monomers including:

- 14 -

Dimethyl aminoethyl acrylate (DMAEA), Dimethylaminoethyl methacrylate (DMAEMA), Dimethylaminopropylacrylamide (DMAPAAM), and Dimethylaminopropyl methacrylamide (DMAPMAAM) which are all (meth)acrylamides or (meth)acrylic acid esters having a dialkylamino group;

Dimethylaminostyrene (DMASt) and Dimethylaminomethylstyrene (DMAMSt) and the like which are styrenes having a dialkylamino group;

4-Vinyl pyridine and 2-vinyl pyridine which are vinyl pyridines; and

Quaternized products of these with a known quaternizing agent such as alkyl halide, benzyl halide, alkyl or aryl sulfonic acid, or dialkyl sulfate.

Among suitable amphoteric adhesive polymers are those derived from monomers such as:

N-(3-sulfopropyl)-N-acryloyloxyethyl-N,N-dimethylammonium betaine, N-(3-sulfopropyl)-N-methacroylamidepropyl-N,N-dimethylammonium betaine, N-(3-carboxymethyl)-N-methacroylamidepropyl-N,N-dimethylammonium betaine and N-carboxymethyl-N-methacroyloxyethyl-N,N-dimethylammonium betaine.

When the salt forming group of the cationic and amphoteric polymers is not ionized, it is preferred to ionize it via neutralization with known acids such as hydrochloric acid

- 15 -

and sulfuric acid which are inorganic acids; acetic acid, propionic acid, lactic acid, succinic acid, glycol acid which are organic acids, or with known bases such as triethylamine, trimethylamine which are tertiary amines; ammonia; or sodium hydroxide.

Most polymers suitable for the present invention will be relatively brittle when dried. Therefore, they require a supporting surface which is a flexible substrate sheet.

Substrate sheets of the present invention may either be occlusive or non-occlusive. Preferably but not necessarily the sheets are non-occlusive to allow water evaporation from the deposited polymer as the film matures. Non-occlusivity or breathability is achieved either through use of a hydrophobic substrate having physical porosity (e.g. pore channels) or a hydrophilic substrate wherein the material of construction inherently allows for breathability. Suitable materials include cellulose such as rayon, wool, cotton, linen, thermoplastic fibers and combinations thereof. They may be woven or nonwoven. Nonwoven rayon is a preferred substrate. Materials formed from combinations of cellulosic with thermoplastic fibers may also be employed. For instance, a hydrophilic polypropylene/rayon combination can be employed for the present invention.

It is advantageous to employ a ratio of composition to substrate sheet in amount ranging from 0.1:1 to 1,000:1, preferably 0.5:1 to 100:1 and optimally 0.8:1 to 10:1 by weight. The polymer ordinarily will constitute from 50 to 100%, preferably from 75 to 99%, optimally from 85 to 95% by

- 16 -

weight of the composition deposited onto the substrate sheet.

Minor adjunct ingredients may also be included such as
5 opacifiers and colorants, each in their effective amounts to accomplish their respective functions.

The following examples will more fully illustrate the
embodiments of this invention. All parts, percentages and
10 proportions referred to herein and in the appended claims are by weight unless otherwise indicated.

EXAMPLE 1

15 A non-woven resin bonded 100% rayon non-apertured fabric from Veratec® is employed as a flexible substrate.
Poly(methyl vinyl ether maleic anhydride) commercially available as Gantrez S-97BF®, is coated by knife-over-roll (25 mil) on the flexible substrate. After coating, the
20 combination of resin and substrate is dried to 75°C in a convection oven. The resultant strip is a dry non-tacky to the touch article approximately 8 centimeters long and 2.5 centimeters wide.

25 Across the dried strip is sprayed a fragrance composition. The composition includes the following perfume components.

- 17 -

PERFUME COMPONENT	WEIGHT %
Phenyl ethyl alcohol	13.00
Dihydromyrcenol	5.00
Linalool	8.00
Bergamot oil	5.00
Galaxolide IMP	10.00
Isolongifolanone	5.00
alpha-Methyl ionone Iso	5.00
Lylal (cycloaliphatic aldehyde)	4.00
Hexyl cinnamic aldehyde	6.00
Lynalyl acetate	3.00
Citronellyl acetate	5.00
Phenyl ethyl acetate	6.00
Acetyl tributyl citrate	25.00

The amount of fragrance deposited on the strip is approximately from 0.1 to 1% by weight of the total strip.

5

Immediately after spraying, the strip is packaged in a laminated foil volatile substance impermeable pouch of approximate size 11 centimeters by 6.5 centimeters. Edges along the perimeter of the pouch are heat sealed to ensure

10

fragrance remains within the pouch.

EXAMPLE 2

A non-woven polypropylene non-apertured fabric, Veratec®

15

2006094, is employed as a flexible substrate.

Poly(dimethylaminopropylacrylamide) is coated by knife-over-roll (25 mil) on the flexible substrate. After coating, the combination of resin and substrate is dried to 75°C in a convection oven. The resultant strip is a dry non-tacky to

- 18 -

the touch article approximately 8 centimeters long and 2.5 centimeters wide.

PERFUME COMPONENT	WEIGHT %
Benzyl salicylate	6.00
Coumarin	4.00
Phenyl ethyl alcohol	10.00
Lilial (acyl substituted aldehyde)	5.00
alpha-Methyl ionone Iso	3.00
Para-t-butyl cyclohexyl acetate	6.00
Dihydromyrcenol	12.00
Acetyl cedrene	6.00
Allyl amyl glycolate	1.00
Galaxolide IPM	5.00
Vanillin	3.00
Hexyl cinnamic aldehyde	5.00
Patchouli oil	5.00
Bergamot oil	10.00
Citronellol	10.00
Carbitol	7.00

- 5 A polyester laminate sheet is unrolled along a conveyer belt. Above the transported strip are a series of nozzles which spray the fragrance mixture of perfume components listed above. Subsequent to the spray station, and before any significant evaporation occurs, the sheet is cut into
- 10 rectangles 11.5 cm by 6.3 cm. Onto the fragrance sprayed surface is deposited the dried strip impregnated with poly(dimethylaminopropylacrylamide). Thereafter, a second of the fragranced sheets is applied in a registered manner over the dried adhesive strip and first sheet. Further
- 15 along the assembly line heat/pressure is applied along the borders of the sheets to bond them together forming a pouch for the adhesive strip. Fragrance is thereby trapped within the pouch.

- 19 -

EXAMPLE 3

A non-woven resin bonded 100% rayon non-apertured fabric from Veratec® is employed as a flexible substrate.

- 5 Polyvinylpyrrolidone/vinyl acetate copolymer, available from the ISP Corporation as E-335, is coated by knife-over-roll (25 mil) on the flexible substrate. After coating, the combination of resin and substrate is dried to 75°C in a convection oven. The resultant strip is a dry non-tacky to
- 10 the touch article approximately 8 centimeters long and 2.5 centimeters wide.

PERFUME COMPONENT	WEIGHT %
Phenyl ethyl alcohol	15.00
Dihydromyrcenol	8.00
alpha-Methyl ionone Iso	6.00
Bergamot oil	5.00
Benzyl salicylate	3.00
Styrallyl acetate	3.00
Hedione	5.00
Lavandin oil abrialis	10.00
Lyrar (cycloaliphatic aldehyde)	1.00
Patchouli oil	8.00
Lemon oil	10.00
Galoxolide DEP	16.00
Linalool	5.00
Acetyl cedrene	5.00

- A pouch is die-cut and formed in a manner similar to that
- 15 described under Example 2. The only difference in the procedure is that the fragrance is applied only after the adhesive strip article has been placed on the first cut sheet. The perfume components listed in the above table are then applied as a fragrance composition along all four
- 20 borders of the pouch forming sheet. Thereafter, the second

- 20 -

sheet of equal diameter is registered over the adhesive strip and first sheet. Heat/pressure is then applied along borders of the sheets to form the pouch. Fragrance is entrapped along the borders. Upon opening the pouch,
5 fragrance is released.

- 21 -

CLAIMS

1. A cosmetic product for removing keratotic plugs from skin pores comprising:

5

(A) a strip comprising:

(i) a flexible substrate sheet; and

10

(ii) a composition containing a polymer selected from the group consisting of anionic, cationic, nonionic, amphoteric, zwitterionic and polymer mixtures thereof deposited onto the substrate sheet, the composition increasing in tackiness upon being wetted just prior to use thereby enhancing the composition adhesivity to skin; and

15

(B) a pouch sealably enclosing the strip, a fragrance also being enclosed but separate from the strip present in an amount from 0.00001 to 2% by weight of the strip.

20

2. The product according to claim 1 wherein the enclosed fragrance comprises a perfume component selected from the group consisting of terpenes, terpenoids and mixtures thereof.

25

3. The product according to claim 1 wherein the enclosed fragrance is present within the pouch at a level from 0.05 to 0.25% by weight of the strip.

30

- 22 -

4. The product according to claim 1 wherein the enclosed fragrance arises from volatilization of a deposited fragrance on an interior lining of the pouch.

5

5. The product according to claim 1 wherein the enclosed fragrance arises from a volatilization of a deposited fragrance on a surface of the strip or on a backing sheet onto which the strip may be removably supported.

10

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 99/01128

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61K7/00 A61K7/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 750 905 A (KAO CORPORATION) 2 January 1997 see page 3, line 21 - line 27 see page 5, line 3 - line 37 see page 8, line 59 - page 9, line 10; claims; examples 1-4 ---	1-5
A	DE 44 33 191 A (LOHMANN THERAPIE-SYSTEME) 21 March 1996 see the whole document ---	1,5
A	WO 97 32567 A (KAO CORPORATION) 12 September 1997 see page 20, line 1 - line 14 see page 22, line 20 - line 25; claims 1,4-7 ---	1
-/--		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

*** Special categories of cited documents :**

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

1 July 1999

Date of mailing of the international search report

12/07/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5816 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Fletcher, A

INTERNATIONAL SEARCH REPORT

Interr 1st Application No
PCT/EP 99/01128

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 514 760 A (KAO CORPORATION) 25 November 1992 see page 4, line 57 - page 5, line 1; claims 1-3; tables 3,5,6 ----	1
P,A	WO 98 42302 A (UNILEVER) 1 October 1998 see page 11, line 29 - line 32; claims -----	1-5

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/01128

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0750905 A	02-01-1997	JP 9278648 A US 5780047 A	28-10-1997 14-07-1998
DE 4433191 A	21-03-1996	WO 9608237 A	21-03-1996
WO 9732567 A	12-09-1997	JP 11012127 A AU 702300 B AU 2231297 A CA 2248326 A EP 0904049 A	19-01-1999 18-02-1999 22-09-1997 12-09-1997 31-03-1999
EP 0514760 A	25-11-1992	JP 5286842 A DE 69219201 D DE 69219201 T EP 0826364 A ES 2102424 T HK 1002603 A US 5512277 A JP 5097627 A	02-11-1993 28-05-1997 14-08-1997 04-03-1998 01-08-1997 04-09-1998 30-04-1996 20-04-1993
WO 9842302 A	01-10-1998	AU 6729298 A AU 6830898 A AU 7041798 A WO 9842303 A WO 9842304 A	20-10-1998 20-10-1998 20-10-1998 01-10-1998 01-10-1998